






Deepwater Horizon
Natural Resource Damage Assessment
Open Ocean Trustee Implementation Group

Draft Restoration Plan 3 and Environmental Assessment: Birds

March 2023

Cover photograph credits:

Top (left to right): National Park Service; U.S Fish and Wildlife Service; Denise Diaz

Middle (left to right): Alan Schmierer; Alan Schmierer; Daniel Lerps

Bottom: S. Cotrell, National Park Service (left); Werner Bayer (right)

Executive Summary

On April 20, 2010, the *Deepwater Horizon* (DWH) mobile drilling unit exploded, resulting in a massive discharge of oil from the BP Exploration and Production, Inc. (BP) Macondo well, causing loss of life and extensive natural resource injuries. Oil spread from the deep ocean to the surface and nearshore environment from Texas to Florida. Extensive response actions were undertaken to try to reduce harm to people and the environment. However, many of these response actions had collateral impacts on the environment and on natural resource services.

As part of a 2016 settlement, BP agreed to pay $8.1 billion in natural resource damages (inclusive of Early Restoration funding) over a 15-year period, and up to an additional $700 million for adaptive management or to address injuries to natural resources that were unknown at the time of the settlement but may come to light in the future. The settlement allocated a specific sum for restoration across Restoration Areas and Restoration Types.

The purpose of restoration, as discussed in this document and detailed in the 2016 *Deepwater Horizon Oil Spill: Final Programmatic Damage Assessment and Restoration Plan/Programmatic Environmental Impact Statement* (PDARP/PEIS),[1] is to make the environment and the public whole for injuries resulting from the DWH oil spill by implementing restoration actions that return injured natural resources and services to baseline conditions and compensate for interim losses, in accordance with the Oil Pollution Act of 1990 (OPA) and associated natural resource damage assessment regulations. The PDARP/PEIS also sets forth the process for subsequent DWH restoration planning to select specific projects for implementation, based on the post-settlement DWH Trustee governance structure. The PDARP/PEIS established a distributed governance structure that assigned a Trustee Implementation Group (TIG) for each of the eight designated Restoration Areas, including the Open Ocean Restoration Area. Each TIG makes all restoration decisions for the funding allocated to its Restoration Area. The Open Ocean TIG (or the TIG) is responsible for restoring natural resources and their services within the Open Ocean Restoration Area that were injured by the DWH oil spill.[2]

The TIG has prepared this draft Restoration Plan 3 and Environmental Assessment: Birds (RP/EA) to address a subset of the injuries to natural resources in the Open Ocean Restoration Area resulting from the DWH oil spill, and to provide the TIG with OPA and National Environmental Policy Act (NEPA) analyses and public input to aid in their decision-making process.

In the PDARP/PEIS, the DWH Trustees developed a set of Restoration Types for inclusion in programmatic alternatives, consistent with the desire to seek a diverse set of projects providing benefits to a broad array of injured resources and services. Ultimately, this process resulted in the inclusion of 13 Restoration Types in the

[1] The PDARP/PEIS and Record of Decision can be accessed at www.gulfspillrestoration.noaa.gov/restoration-planning/gulf-plan/.

[2] The Open Ocean TIG addresses a wide range of resources that make use of the open ocean, including water column and ocean bottom fish and invertebrates, sea turtles, birds, marine mammals, sturgeon, and deep-sea coral reefs. Many species that spend part of their lives in the Gulf of Mexico also migrate to other places—as far away as Canada and the Mediterranean Sea. The Open Ocean TIG will address these species throughout their life stages and geographic ranges, including restoration in offshore, coastal, and inland areas, and outside of the Gulf of Mexico.

five programmatic Restoration Goals evaluated for restoration.[3] The project alternatives evaluated in this RP/EA are consistent with the Restoration Approaches under the Birds Restoration Type, as described in Section 5.5.12 of the PDARP/PEIS:

- Restore and conserve bird nesting and foraging habitat;
- Establish or reestablish nesting colonies; and
- Prevent incidental bird mortality.

The OPA NRDA regulations provide that Trustees must consider a reasonable range of restoration alternatives before selecting their preferred alternative(s) (15 CFR § 990.53). The Open Ocean TIG reviewed 76 restoration project ideas (including 59 bird ideas) proposed by individual members of the public, non-governmental organizations, and local, state, and federal agencies – ultimately identifying 11 project alternatives for full evaluation in this document, as summarized in Table ES-1.

Table ES-1 Alternatives Considered in this RP/EA

Alternative		Estimated Project Costs
Predator Removal and Seabird Nesting Colony Restoration at Mona Island This project would increase nesting success and productivity of Caribbean-nesting seabirds (Audubon's shearwater, sooty and bridled terns, magnificent frigatebirds, masked and brown boobies, brown noddy, and white-tailed tropicbird) through invasive species management, habitat restoration, and nesting colony expansion. Restoration activities would include: (1) removal of invasive rodents, cats, and pigs; (2) propagation and planting of native plants and removal of invasive plants; (3) expansion of existing or establishment of new nesting colonies through social attraction techniques;[4] and (4) development and implementation of biosecurity measures.[5]	Preferred	$9,039,500

[3] PDARP/PEIS programmatic Restoration Goals include: 1) Restore and conserve habitat; 2) Restore water quality; 3) Replenish and protect living coastal and marine resources; 4) Provide and enhance recreational opportunities; and 5) Provide for monitoring, adaptive management, and administrative oversight to support restoration implementation. Restoration Types include: 1) Wetlands, Coastal, and Nearshore Habitats; 2) Habitat Projects on Federally Managed Lands; 3) Nutrient Reduction; 4) Water Quality; 5) Fish and Water Column Invertebrates; 6) Sturgeon; 7) Submerged Aquatic Vegetation; 8) Oysters; 9) Sea Turtles; 10) Marine Mammals; 11) Birds; 12) Mesophotic and Deep Benthic Communities; and 13) Provide and Enhance Recreational Opportunities.

[4] For the purposes of this RP/EA, social attraction techniques refer to actions taken to establish or reestablish bird nesting colonies by attracting breeding adults to restoration sites. This could include the placement of bird or egg decoys, mirrors, or sound systems at the restoration site.

[5] For the purposes of this RP/EA, biosecurity measures refer to actions taken, such as the placement of rodenticide bait stations, to reduce the risk of (re)introduction of invasive species (e.g., rodents, cats, pigs, or other invasive species) that harm seabirds and seabird nesting habitat.

Alternative		Estimated Project Costs
Predator Removal and Seabird Nesting Colony Restoration in the Culebra Archipelago This project would increase nesting success and productivity of Caribbean-nesting seabirds (Audubon's shearwater, sooty and bridled terns, brown booby, brown noddy, and red-billed and white-tailed tropicbirds) by enhancing habitat for existing seabird nesting colonies. Restoration activities would include: (1) invasive mammal and plant removal; (2) construction of a predator-proof fence; (3) expansion of existing or establishment of new nesting colonies through social attraction techniques; and (4) development and implementation of biosecurity measures.	Non-preferred	$1,700,000
Seabird Nesting Colony Reestablishment and Protection at Desecheo National Wildlife Refuge This project would increase nesting success and productivity of Caribbean-nesting seabirds (bridled and sooty terns, brown booby, magnificent frigatebird, and brown noddy) by expanding existing and creating new nesting colonies. Restoration activities would include: (1) expansion of existing or establishment of new nesting colonies through social attraction techniques and (2) enhancement of the National Wildlife Refuge's existing biosecurity activities.	Preferred	$214,500
Seabird Nesting Colony Protection and Enhancement at Dry Tortugas National Park This project would increase nesting success and productivity of seabirds (magnificent frigatebird, sooty and bridled terns, brown noddy, and masked booby) through nesting colony monitoring, restoration, and enhancement. Restoration activities, conducted in phases, would include: (1) aerial surveys to establish a seabird population baseline; (2) enhancement of existing biosecurity measures; (3) nesting colony expansion and establishment at protected sites through social attraction techniques; and (4) targeted habitat improvements.	Preferred	$1,183,200
Common Tern Nesting Colony Restoration in the Great Lakes Region This project would increase nesting success, survival, and productivity of the common tern at nesting sites in the Great Lakes region through a multi-phased approach. The first phase would include assembling and coordinating a Great Lakes tern conservation working group to identify and prioritize restoration activities. Phases II and III would include creating a centralized monitoring database and sharing information to identify best management practices and implementing stewardship activities and habitat enhancement activities throughout the region.	Non-preferred	$3,520,000
Seabird Bycatch Reduction in Northeast U.S. and Atlantic Canada Fisheries This project would reduce incidental mortality of great shearwaters, northern gannets, and other DWH-injured seabirds by reducing seabird bycatch in U.S. and Canadian North Atlantic commercial fisheries. Restoration activities, conducted in phases, would include: (1) pilot testing seabird bycatch reduction strategies; (2) identifying and prioritizing seabird bycatch reduction strategies through modeling; (3) establishing and expanding partnerships with commercial fisheries; and (4) continued testing, field studies, and other activities to expand understanding of seabird-fishery interactions and support the voluntary adoption of the most effective seabird bycatch reduction strategies.	Preferred	$5,052,000

Alternative		Estimated Project Costs
Seabird Bycatch Risk Reduction in Gulf of Mexico and Southeast U.S. Pelagic Longline Fisheries This project would reduce the risk of incidental mortality of northern gannets, great shearwaters, and other DWH-injured seabirds by reducing seabird bycatch in the Gulf of Mexico and Southeast Atlantic pelagic longline (PLL) commercial fisheries. Restoration activities would include: (1) modeling seabird bycatch hotpots in the Gulf of Mexico and Southeast U.S. Atlantic Ocean waters; (2) collaborating with PLL captains and crew members to better understand seabird interactions in the fishery and identify seabird bycatch reduction strategies; and (3) implementing a voluntary pilot project with the PLL fishery to test seabird bycatch reduction strategies.	Non-preferred	$1,546,500
Northern Gannet Nesting Colony Restoration in Eastern Canada This project would increase nesting success, survival, and productivity of northern gannets at nesting colonies in eastern Canada. Restoration actions would include: (1) expansion of existing and/or establishment of new nesting colonies through social attraction techniques; (2) management of human and predator disturbance; and (3) land-based removal of washed-up marine debris on colonies where it impacts nesting.	Preferred	$5,680,000
Common Tern Nesting Colony Restoration in Manitoba This project would increase nesting success, survival, and productivity of the common tern at nesting locations in Manitoba, Canada. Restoration activities would include: (1) stewardship and protection of existing colonies; (2) management of human and predator disturbance; and (3) establishment of new colonies at protected sites through social attraction.	Preferred	$4,400,000
Seabird Nesting Habitat Restoration and Colony Reestablishment in the Bahamas This project would increase nesting success and productivity of Caribbean-nesting seabirds (Audubon's shearwater, sooty and bridled terns, brown noddy, brown booby, and white-tailed tropicbird) through stewardship, protection, and creation of nesting colonies. Restoration activities would include: (1) seabird population baseline and site assessments; (2) training and capacity development; (3) development of seabird management plans; (4) eradication of invasive plant and mammal species; (5) nesting colony restoration and enhancement using social attraction; (6) development and implementation of biosecurity measures; and (7) community engagement to support biosecurity efforts.	Non-preferred	$7,150,000
Invasive Goat Removal to Restore Seabird Nesting Habitat in St. Vincent and the Grenadines This project would increase nesting success and productivity of Caribbean-nesting seabirds (magnificent frigatebird, red-billed tropicbird, brown booby, brown noddy, and bridled and sooty terns) by removing invasive goats from Battowia and the Pillories Islands. Restoration activities would include (1) goat eradication, (2) monitoring for rodent presence, and (3) a public outreach campaign.	Preferred	$231,000
	Sum (Preferred)	$25,800,200

Based on information and analyses presented in this document, the Open Ocean TIG is proposing seven project alternatives for implementation, at a total estimated cost of $25,800,200 (Table ES-1). Table E-S 2 provides a summary of the anticipated environmental consequences of the 11 projects (7 preferred; 4 non-preferred), and the no action alternative, evaluated in this RP/EA.

Table ES-2 Summary of Environmental Consequences for Alternatives Considered in this RP/EA

Project	Geology and Substrates	Hydrology and Water Quality	Air Quality	Noise	Habitats	Wildlife Species	Marine and Estuarine Fauna	Protected Species	Socioeconomics and Environmental Justice	Cultural Resources	Infrastructure	Land and Marine Management	Tourism and Recreational Use	Fisheries and Aquaculture	Marine Transportation	Aesthetics and Visual Resources	Public Health and Safety
No Action	l	NE	NE	NE	L	L	l	L	NE	NE	NE	NE	l	NE	NE	l	l
Predator Removal and Seabird Nesting Colony Restoration at Mona Island	s,l,+	s,+	s	S,L,+	S,L,+	S,L,+	NE	S,L,+	s,+	NE	NE	s,+	s,l,+	NE	NE	s,+	s
Predator Removal and Seabird Nesting Colony Restoration in the Culebra Archipelago	s,+	s,+	s	S,+	s,+	S,l,+	NE	S,l,+	s,+	NE	NE	+	s,+	NE	NE	s,l,+	s
Seabird Nesting Colony Reestablishment and Protection at Desecheo NWR	NE	NE	s	+	s,+	s,+	NE	s,+	+	NE	NE	+	+	NE	NE	+	NE
Seabird Nesting Colony Protection and Enhancement at Dry Tortugas National Park	s,+	s,+	s	+	s,+	s,+	NE	s,+	+	NE	NE	+	+	NE	NE	+	NE
Common Tern Nesting Colony Restoration in the Great Lakes Region	S,L,+	S,L,+	s	S,+	S,L,+	S,+	S,L,+	S,+	s,+	NE	NE	s,l,+	s,l,+	NE	NE	s,+	s
Seabird Bycatch Reduction in Northeast U.S. and Atlantic Canada Fisheries	NE	NE	s	+	NE	s,+	s,+	s,+	NE	NE	NE	NE	+	+	NE	NE	NE
Seabird Bycatch Risk Reduction in Gulf of Mexico and Southeast U.S. Pelagic Longline Fisheries	NE	NE	s	+	NE	s,+	s,+	s,+	NE	NE	NE	NE	+	+	NE	NE	NE
Northern Gannet Nesting Colony Restoration in Eastern Canada	s,+	NE	s	s,+	s,+	S,+	NE	s,+	+	NE	NE	+	+	NE	NE	s,+	+
Common Tern Nesting Colony Restoration in Manitoba	S,l,+	s,+	s	s,+	S,+	S,+	+	S,+	s,+	NE	NE	s,l,+	s,l,+	NE	NE	s,+	s,+
Seabird Nesting Habitat Restoration and Colony Reestablishment in the Bahamas	S,+	s,+	s	s,+	S,L,+	S,L,+	NE	S,L,+	s,+	NE	NE	+	+	NE	NE	s,+	s
Invasive Goat Removal to Restore Seabird Nesting Habitat in St. Vincent and the Grenadines	s,+	+	s	+	s,+	s,+	+	s,+	S,+	NE	NE	L	+	NE	NE	s,+	s

+ Beneficial effect
NE No effect
s Short-term minor adverse effect
S Short-term moderate adverse effect
S Short-term major adverse effect
l Long-term minor adverse effect
L Long-term moderate adverse effect
L Long-term major adverse effect

The public is encouraged to review and comment on this draft RP/EA. Following public notice, the draft RP/EA will be available to the public for a 45-day comment period. The deadline for submitting written comments on the draft RP/EA is specified in the public notice published in the *Federal Register* and on the Gulf Spill Restoration website (see link below). Comments must be postmarked no later than 45 days after the start of the comment period. Comments on the draft RP/EA can be submitted during the comment period by one of the following methods:

Online: The public may access a link to the RP/EA's Planning, Environment, and Public Comment portal by navigating first to www.gulfspillrestoration.noaa.gov/restoration-areas/open-ocean

By mail: Hard copy addressed to U.S. Fish and Wildlife Service Gulf Restoration Office, 1875 Century Blvd., Atlanta, GA 30345. To be considered, mailed comments must be postmarked on or before the comment deadline specified in the *Federal Register* and on the Gulf Spill Restoration website.

By toll-free phone: 1-888-467-0009**During one of the public webinars**: The Open Ocean TIG will hold public webinars to facilitate the public review and comment process. A weblink for the public webinars will be provided on the Gulf Spill Restoration website. Webinar dates and times are as follows:

- Tuesday, March 28, 2023, from 12:00 – 1:30 PM Eastern Time
- Tuesday, April 4, 2023, from 4:00 – 5:30 PM Eastern Time

Please note that personal identifying information included in submitted comments (e.g., address, phone number, email address) may be made publicly available.

After the public comment period closes, the Open Ocean TIG will consider all input received during the public comment period and then finalize the RP/EA. A summary of comments received and the TIG's responses will be included in the Final RP/EA.

Overall, this RP/EA is intended to provide the public with information and analysis needed to enable meaningful review and comment on the Open Ocean TIG's proposal to implement projects addressing injuries to birds resulting from the DWH oil spill. Ultimately, this RP/EA and the corresponding opportunity for the public to review and comment on the document are intended to guide the TIG's selection of projects for implementation that best meets its purpose and need, as summarized above, and described in more detail in subsequent sections of this document.